

Kentucky Public Health Advisory 04/28/2006

Mumps Immunity for Healthcare Workers

This Public Health Advisory is to reiterate and add clarification to the last mumps advisory released on April 14, 2006. The largest mumps epidemic in America in about 25 years has now been reported in Iowa, with over 1200 cases identified. The illness has spread to at least 11 other states. Three states bordering Kentucky (i.e., Indiana, Illinois, and Missouri) have already reported confirmed mumps cases associated with this outbreak. Mumps is expected to spread to Kentucky from one or more of the outbreak states. Currently, consider Kentucky to be in a mumps pre-outbreak status.

Immunity for Public Health Healthcare Workers (HCWs) — Pre-Outbreak

Definition of HCWs: The Centers for Disease Control defined HCWs as “physicians, nurses, emergency medical personnel, dental professionals and students, medical and nursing students, laboratory technicians, hospital volunteers, and administrative staff” AND as “medical or nonmedical, paid or volunteer, full time or part time, student or nonstudent, with or without patient-care responsibilities,”
<http://www.cdc.gov/mmwr/preview/mmwrhtml/00050577.htm>.

During this pre-outbreak period, the Kentucky Department for Public Health now recommends that public health employers assure that HCWs at state and local health departments (LHDs) have documented evidence of immunity to mumps by one of the following four options, listed in preferred order:

1. **Identify HCWs born before 1957:** “Adults born before 1957 can be considered immune” to mumps, <http://www.cdc.gov/mmwr/preview/mmwrhtml/00050577.htm>. Mumps was a common childhood disease in the United States prior to the development of mumps vaccine.
2. **For HCWs born in 1957 and after, obtain evidence of immunity to mumps that was previously documented before April 2006** from employee, medical, school, or personal records. Acceptable evidence of immunity to mumps would be:
 - a. **Documentation of physician diagnosed mumps**, with date of diagnosis. The last mumps outbreak in America was about 20 years ago. HCWs born between 1957 and 1978 may have difficulty in demonstrating immunity to mumps by finding such medical record evidence.
 - b. **Two documented doses** of MMR vaccine or other mumps containing vaccines. Some HCWs may have insufficient documentation such as one dose of MMR.
 - c. **Laboratory evidence of mumps immunity** (i.e. positive IgG mumps antibody).
3. **Give Measles, Mumps, and Rubella (MMR) vaccine** to HCWs born in 1957 or after who have no medical contraindication for receiving MMR vaccine and cannot document immunity to mumps, as above. Give the first dose of MMR vaccine to those HCWs who have no documentation of immunity to mumps (after considering Option 2). A second dose of MMR vaccine may be administered as soon as

Kentucky Public Health Advisory 04/28/2006

4 weeks (i.e., 28 days) after the first dose. For HCWs born in 1957 or after who have documentation of only one dose of MMR, give a second dose of MMR vaccine as soon as 4 weeks (i.e., 28 days) after the first dose.

The following information is to clarify the use of federal or state purchased MMR vaccine for HCWs:

- Federal and state purchased MMR vaccine will be available (as 317 funds allow) only for HCWs at state or local health departments. Use normal MMR vaccine ordering procedures, BUT indicate on the order sheet that the MMR vaccine is for "Health Department Employee Health Programs."
- MMR vaccine needed to immunize any HCWs at hospitals, nursing homes, and other private employers (i.e., physician or dentist offices) AND all non-VFC eligible persons would have to be purchased separately by the LHD. LHD staff would need to use their existing supplier or purchase directly from their area Merck representative.
- As a reminder, VFC purchased MMR vaccine CAN ONLY be used for VFC eligible persons.

4. **Demonstrated laboratory evidence for immunity to mumps, newly obtained in or after April 2006.** Order new laboratory testing for immunity to mumps for HCWs with a medical contraindication to their receiving MMR vaccine. Because reagents for these tests are in short supply and because administration of MMR helps assure immunity to both measles and rubella, in addition to mumps, laboratory testing for proof of immunity to mumps is the least preferred option for public health HCWs. When necessary, however, specimens for "IgG mumps antibody" laboratory testing for these selected HCWs at state and local health departments can be sent to the State Laboratory (use payer code 4, i.e. no cost to LHDs). A form has been developed for submission of these specimens and will be separately sent to LHDs.

As described in the package insert, **DO NOT** give MMR vaccine to:

- Individuals with a hypersensitivity to any component of the vaccine, including gelatin.
- Women who are pregnant.
- Individuals with a history of anaphylactic or anaphylactoid reactions to neomycin.
- Individuals receiving immunosuppressive therapy including high-dose systemic corticosteroids.
- Individuals with blood dyscrasias, leukemia, lymphomas of any type, or other malignant neoplasms affecting the bone marrow or lymphatic systems.
- Individuals with primary and acquired immunodeficiency states, including AIDS.
- See package insert WARNING about administering MMR to individuals with a history of anaphylactic or other immediate hypersensitivity reactions (e.g., hives, swelling of the mouth and throat, difficulty breathing, hypotension, or shock) after egg ingestion.

Employee work exclusions for HCWs. Health care leaders need to be reminded that there is no effective medication to treat mumps disease. There also is no postexposure medication to be offered to non-immune individuals to prevent infection or disease. Immunization after exposure may not always prevent mumps infection or disease. A HCW with a confirmed clinical case of mumps would need to be excluded from work until 9 days after onset. In addition, exposed, susceptible HCWs may need to be excluded from work for up to two weeks (from the 12th through the 25th day after mumps exposure). Employers should review existing policies that would pertain if current

Kentucky Public Health Advisory 04/28/2006

employees were to refuse to participate in Employee Health Programs that would assure immunity to mumps.

Immunity for HCWs in Community Settings — Pre-Outbreak

The recommendations in Option 1 and Option 2 for immunity to mumps for Kentucky Public Health HCWs should also pertain to HCWs in community settings at hospitals, nursing homes, and other private employers (i.e., physician or dentist offices).

Employers in community settings may choose to implement Option 3 and Option 4 differently from public health employers.

- The cost benefit of providing one or two doses of MMR vaccine versus the costs and availability for new laboratory screening for IgG mumps antibody may differ for community-based employers from public health employers.
- Unfortunately, the State Laboratory WILL NOT perform routine employee health serology tests for HCWs in these community settings due to possible reagent shortages resulting from high volume testing. Such specimens need to be sent to another reference laboratory.
- Some laboratories in states with current mumps outbreaks have had shortages in reagents for mumps antibody testing. It is possible that reagents needed during an outbreak to diagnose and confirm mumps in ill patients could be depleted by employee health screening programs before or during an outbreak.
- Community employers should carefully consider large numbers of new IgG mumps antibody tests for those HCWs who have NO medical contraindication to their receiving MMR vaccine.

Immunity for HCWs in a Mumps Outbreak:

If a mumps outbreak occurs in Kentucky (i.e., there are more than five cases of mumps that are epidemiologically linked), then the evidence needed for HCW immunity to mumps could quickly change to a higher level as currently recommended in outbreak states, like Iowa. One change could be that birth before 1957 would not be sufficient to document HCW immunity to mumps. In the pre-outbreak setting, healthcare employers are encouraged to review records of HCWs born before 1957 for any evidence of immunity to mumps that was previously documented before April 2006, as described in Option 2. Having such data additionally available for HCWs born before 1957 would enable any changes in recommendations to be quickly implemented, if the current US mumps outbreak evolves and spreads to Kentucky.

http://www.idph.state.ia.us/adper/common/pdf/mumps/031606_healthcare.pdf .

If you have questions or comments regarding this mumps Public Health Advisory, please contact Diane Chism, RN, in the Immunization Program at 502-564-4478 or Robert Brawley, MD, MPH at 502-564-7243.